

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-13 are currently pending in the application. Claims 1-4 and 9 are amended by the present amendment. Support for amended Claims 1-4 and 9 can be found in the original specification, claims and drawings. No new matter is presented.

In the Official Action, Claims 1-4 and 9 were rejected under 35 U.S.C. §103(a) as unpatentable over Applicants' Background (herein, Background) in view of Tsunehara et al. (U.S. Pat. 6,907,260, herein Tsunehara); Claim 5 was rejected under 35 U.S.C. §103(a) as unpatentable over Background in view of Tsunehara and Komatsu (U.S. Pub. 2001/0023188); Claim 10 was rejected under 35 U.S.C. §103(a) as unpatentable over Tsunehara in view of Kuo et al. (U.S. Pat No. 6,542,718, hereinafter Kuo); and Claims 6-8 and 11-13 were objected to as dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

As an initial matter, Applicants appreciatively acknowledge the courtesy extended by Examiner Haile and Supervisory Patent Examiner Moe in holding a personal interview with the undersigned on May 23, 2008. During the interview, an overview of the invention was presented, and differences between the pending claims and the applied references were discussed. No agreement was reached during the interview pending a formal response to the outstanding Office Action. The substance of the interview is reflected in amended independent Claims 1-4 and 9, and in the remarks presented below.

Applicants appreciatively acknowledge the indication of allowable subject matter. However, since Applicants consider that independent Claims 4 and 10 patentably define over the applied references, the remaining dependent claims are maintained in dependent form.

Regarding the rejection of Claims 1-4 and 9 under 35 U.S.C. § 103(a) as unpatentable over Background in view of Tsunehara, Applicants respectfully submit that amended independent Claims 1-4 and 9 recite novel features clearly not taught or rendered obvious by the applied references.

Independent Claim 1 relates to a transmission power control method for controlling the transmission power of packet signals transmitted from a mobile station via an upstream radio channel in a radio communication system for allowing radio communications between base stations and a plurality of mobile stations. Independent Claim 1 recites, in part, that the method comprises:

measuring the traffic volume of the packet signals in the base station; and
switching between *a first control method for determining the transmission power* [of packet signals transmitted from a mobile station via an upstream radio channel] and *a second control method for determining the transmission power...*

Independent Claims 2-4 and 9, while directed to alternative embodiments, recite similar features. Accordingly, the remarks and arguments presented below are applicable to each of amended independent Claims 1-4 and 9.

With regard to Claim 1, the Office Action cites Background as disclosing the claimed invention with the exception of “measuring the traffic volume of the packet signals in the base station” and “switching between a first control method and a second control method based on the measured traffic volume in the base station.”¹ The Official Action cites Tsunehara as disclosing these claimed features and states that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the cited references to arrive at Applicants’ claims. Applicants respectfully traverse this assertion as Tsunehara fails

¹ Outstanding Official Action, p. 3.

to teach or suggest the more detailed aspects directed to switching between a first and second control method, as recited in independent Claims 1-4 and 9.

Tsunehara describes a transmission power controlling method for reducing an influence of incorrect control in a mobile communication system.² Tsunehara, however, fails to teach or suggest “switching between a first control method *for determining the transmission power* [of packet signals transmitted from a mobile station via an upstream radio channel] and a second control method *for determining the transmission power...*” as recited in independent Claim 1.

In addressing previously presented arguments directed to the “switching” feature, p. 9 of the Office Action notes that Tsunehara “suggests a selector for choosing either a 0 or 1 to instruct the mobile station on how to control power,” citing Fig. 31 and col. 2, ll. 38-42. However, the instruction output by the base station in Tsunehara is the result of a single control method that instructs the mobile station to either raise or lower power.

More particularly, col. 2, ll. 15-19; and 34-42 of Tsunehara describes that the upstream channel transmit power controlling signal generating portion 222 compares SIRa to SIRn with target SIRs given for each mobile station to generate transmit power controlling signals for each mobile station. As shown in Fig. 31, a measured SIR corresponding to each mobile station is compared to a threshold SIR and an output is generated that instructs a mobile station to increase or reduce transmit power. This comparison, or method, is one transmission power control method, and does not constitute “switching between a first control method *for determining the transmission power* [of packet signals transmitted from a mobile station via an upstream radio channel] and a second control method *for determining the transmission power...*” as recited in independent Claim 1.

² Tsunehara, Abstract.

In other words, measuring an SIR corresponding to a signal received from a single mobile station and comparing the SIR to a threshold SIR in order to instruct the mobile station to increase or decrease transmission power (e.g., by way of adjusting a TPC command), constitutes one method resulting in a plurality of possible outputs. The output of either a 1 or 0 are not separate methods *for determining transmission power*, but instead are output as the result of the implementation of a single power control method.

In contrast, independent Claim 1 is amended to recite “switching between a first control method *for determining the transmission power* [of packet signals transmitted from a mobile station via an upstream radio channel] and a second control method for *determining the transmission power...*” Tsunehara clearly does not switch between a first control method and a second control method, whatsoever, but instead simply measures an SIR received from a single mobile station, compares to a threshold SIR and instructs the mobile station whether or not to increase or decrease transmission power (e.g., performs a single method of inner loop power control).

Therefore, Background and Tsunehara, neither alone, nor in combination teach or suggest “*switching between a first control method for determining the transmission power and a second control method for determining the transmission power...*” as recited in independent Claim 1.

Accordingly, Applicants respectfully request that the rejection of Claim 1 under 35 U.S.C. § 103 be withdrawn. For substantially similar reasons, it is also submitted that independent Claims 2-4 and 9 patentably define over Background and Tsunehara.

With regard to the rejection of Claim 5 under 35 U.S.C. § 103(a) as unpatentable over Applicants’ background material in view of Tsunehara and Komatsu, it is noted that Claim 5 depends from independent Claim 4, and is believed to be patentable for at least the reasons

discussed above. Further, it is respectfully submitted that Komatsu fails to remedy any of the above-noted deficiencies of Tsunehara and Background.

Accordingly, Applicants respectfully request that the rejection of Claim 5 under 35 U.S.C. § 103 be withdrawn.

Regarding the rejection of Claim 10 under 35 U.S.C. § 103(a) as unpatentable over Tsunehara in view of Kuo, Applicants respectfully traverse this rejection as independent. Claim 10 recites novel features clearly not taught or rendered obvious by the applied references.

Independent Claim 10 is directed to a mobile station for communicating with a base station similar to that recited in independent Claim 1 via code division multiple access (CDMA) radio channels. The mobile station includes:

... an extractor configured to extract the traffic volume of packet signals transmitted via upstream radio channels and a control method of the transmission power of the packet signals selected in the base station, from the notification signal; and
a transmission judger configured to judge *whether or not to transmit the packet signals, based on the received power of the notification signals, the traffic volume of the packet signals and the control method of the transmission power of the packet signals.*

In addressing the previously presented arguments that Tsunehara fails to teach or suggest the claimed “a transmission judger,” p. 7 of the Office Action concedes that Tsunehara fails to disclose “a transmission judger configured to judge whether or not to transmit the packet signals based on information.”

In an attempt to remedy this deficiency, the Office Action relies on Kuo and asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate “the methodology for signal transmission” of Kuo into the power control method of Tsunehara. Applicants, however, respectfully submit that Kuo fails to disclose the claimed features for which it is relied upon as a secondary reference under 35 U.S.C. § 103.

Kuo describes a method and apparatus for terminating a burst transmission in a wireless system. Kuo, at col. 3, ll. 17-28 and Fig. 3, describes that a judgment is made by a base station whether to terminate burst transmission based on whether an interference value exceeds a threshold interference level.

Kuo, however, fails to teach or suggest a **mobile station** configured to “judge **whether or not to transmit the packet signals, based on the received power of the notification signals, the traffic volume of the packet signals and the control method of the transmission power of the packet signals,**” as recited in independent Claim 10. Instead, as noted above, Kuo merely describes determining whether to terminate burst transmission completely at a base station based on a threshold interference value.

Accordingly, for at least the reasons discussed above, Applicants respectfully request that the rejection of Claim 10 under 35 U.S.C. § 102(e) be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-13 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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